## **ABSTRACT**

Methods and systems for performing pacing interval optimization at elevated heart rates are provided. One or more optimum pacing interval is determined for each of a plurality of different ranges of heart rate. For a specific heart rate range, the information (e.g., measures of hemodynamic response) collected to perform pacing interval optimization can be collected and stored in a table over disjoint periods of time. Such measures of hemodynamic performance are preferably relative measures, but can alternatively be absolute measures.